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(54) **PORTABLE DWELLING**

TRAGBARE BEHAUSUNG

UNITÉ D'HABITATION PORTABLE

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Description

BACKGROUND OF THE INVENTION

[0001] The present disclosure relates generally to a portable dwelling, particularly to a portable dwelling for a homeless person, and more particularly to a portable dwelling that can be used to establish a community for homeless people.

[0002] Homeless people are not defined by their gender, race, national origin, or location on earth, they are just like everyone else, they are everywhere, but they do not have a home. We have all seen them on city streets and even in small towns. People who have lost not just their homes, but their entire way of life. We see them shuffling along with their shopping carts and plastic bags, looking for a cool place to sit down in summer and for a warm place to sleep in winter. We can't see a way to give them all homes, especially as their numbers keep growing. And so we look away. We walk past them, a little afraid to make eye contact in case they ask us for something.

[0003] On any given night in the United States, it is reported that 750,000 people are homeless. And during the course of a year, as many as 3 million people are reported to experience homelessness at some point. Some of the homeless look for permanent housing and the services that will enable them to live somewhere other than on the streets, while other homeless just care about getting through one day to the next.

[0004] While existing programs and shelters for the homeless provide some degree of comfort and relief, there remains a need for a program that can continue to grow and evolve as the needs of our world's homeless change, that can provide a way to help the homeless today, that can provide some relief to our neediest citizens, and that can provide respite for our world's homeless people until a better solution comes along. It's the least we can do. DE 10105646, over which the independent claims are characterised, discloses a sleeping container with wheels for homeless people.

BRIEF DESCRIPTION OF THE INVENTION

[0005] According to an aspect of the present invention, there is provided a portable dwelling as claimed in claim 1.

[0006] According to an aspect of the present invention, there is provided a portable dwelling as claimed in claim 2. According to an aspect of the present invention, there is provided a plurality of portable dwellings as claimed in claim 11.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] Referring now to the drawings, which are meant to be exemplary and not limiting, and wherein like elements are numbered alike in the accompanying Figures:

Figure 1 depicts a front isometric view of an exemplary portable dwelling in accordance with an embodiment of the invention;

Figure 2 depicts an end view of the portable dwelling of Figure 1;

Figure 3 depicts a front view a rear portion of the portable dwelling of Figure 1;

Figure 4 depicts a section view of the rear portion of Figure 3;

Figure 5 depicts a section view of a ventilation opening of the rear portion of Figure 3;

Figure 6 depicts a front isometric view of two portable dwellings of Figure 1 stacked in accordance with an embodiment of the invention;

Figure 7 depicts an end view of an alternative stacking arrangement to that depicted in Figure 6;

Figure 8 depicts a top view to two portable dwellings of Figure 1 coupled end to end;

Figure 9 depicts a front view of the two portable dwellings of Figure 8;

Figure 10 depicts a front isometric cutaway view of the portable dwelling of Figure 1 showing exemplary compression clamps in accordance with an embodiment of the invention;

Figure 11 depicts a partial section view of the compression clamp of Figure 10;

Figure 12 depicts an interior surface of a left side portion of the portable dwelling of Figure 1;

Figure 13 depicts an interior surface of a right side portion of the portable dwelling of Figure 1;

Figure 14 depicts an interior cutaway view of a roof portion of the portable dwelling of Figure 1;

Figure 15 depicts an outside end view of a side portion of the dwelling showing handles attached thereto;

Figure 16 depicts an outside isometric view of the side portion of Figure 15 with alternative handles attached thereto;

Figure 17 depicts a partial section view of an alternative handle to those depicted in Figures 15 and 16;

Figure 18 depicts a partial section view of a latch mechanism in accordance with an embodiment of the invention;

Figure 19 depicts a partial isometric view of portions of the portable dwelling showing a knock down construction;

Figure 20 depicts a top plan view of floor and wall portions of the portable dwelling of Figure 1 with a roof portion removed, and an expanded view of a corner region thereof;

Figure 21 depicts a quad arrangement of the portable dwellings of Figure 1 showing a screen portion over two adjacent roof portions;

Figures 22-27 depict several plan views of communal arrangements of the dwellings of Figure 1 in accordance with embodiments of the invention; and

Figure 28 depicts a cutaway isometric view of the portable dwelling of Figure 1 with exemplary internal

and external features added.

DETAILED DESCRIPTION OF THE INVENTION

[0008] An embodiment of the invention, as shown and described by the various figures and accompanying text, provides a portable dwelling for a homeless person that can be coupled with one or more other dwellings to establish a community for the homeless, thereby providing a sense of community and belonging to those who are all too familiar with isolation.

[0009] The dwelling disclosed herein is also referred to as a portable home that can be maneuvered like a cart.

[0010] Though the primary goal of the portable home is to provide homeless people with shelter from the weather and a degree of privacy from the world, a secondary goal is to provide them some mental stimulation and some sense of personal identity again. As such, each dwelling may also be provided with a small 4-inch X 6-inch document holder located on an outside surface of the dwelling, which could be used to personalize the dwelling.

[0011] Upon distribution of an exemplary dwelling to a homeless person, a photograph of that person, if they are so willing, could be taken and his or her name printed on a card, which could then be tucked into the document holder and sealed with tape. This would be a visible symbol that the person now owns that dwelling. It would also help officials locate and identify persons when needed. This service would be optional since some homeless people will not want to be identified.

[0012] Other amenities for use with the dwelling may also be provided, such as a solar flashlight, a lightweight insulated blanket, a gel mattress and pillow with covers, some mesh bags for storing personal items, toiletries, especially travel size, small bags, nail clippers, emory boards, sanitary supplies, personal wipes, plastic containers, plastic sealable bags, pre-packaged portable food packs, such as freeze-dried foods, nuts and dried fruits, plastic utensils, magazines, paperback books, and children's toys and books, to name a few.

[0013] In an embodiment, a plurality of dwellings may be joined side-by-side or stacked no more than two high to allow families to share a common living space.

[0014] With reference now to Figure 1, an exemplary embodiment of the dwelling 100 is disclosed having an enclosure 105 defining an interior space 110 so dimensioned to receive an adult human being 115 (stick figure representation) in a reclined or laying position and in an upright sitting position (Figure 1 illustrating the sitting position) within the interior space 110. The enclosure 105 includes a frame defined by a plurality of rigid panel surfaces 120 (having individual reference numerals 121-126, discussed further below) between the interior space 110 and an exterior space 130 capable of maintaining dryness of the interior space in the event of a rainfall in the exterior space. As used herein, rigid panel surfaces means rigid panels, as opposed to pipes or

tubes covered by flexible fabric, that provide structural surfaces having overall dimensions of respective lengths, widths, and heights, of enclosure 105, and being structurally suitable for stacking one dwelling on top of another. A plurality of wheels 135 are attached to the enclosure 105 to facilitate movement of the enclosure 105 along the ground 140. For maneuverability, one set of wheels 136 are fixed wheels (non-swiveling), and another set of wheels 137 are swivel wheels. In an embodiment, both sets of wheels are lockable.

[0015] In an embodiment, an outside length L of the enclosure 105 is 5-feet (1.52 meters), an outside width W of the enclosure 105 is 2.5-feet (0.76 meters), a height H1 of the enclosure 105 with wheels 135 is 4-feet (1.22 meters), and a height H2 without wheels 135 is 3-feet (0.91 meters). However, it will be appreciated that such dimensions are exemplary only and are not intended to be limiting in any way. For example, the enclosure 105 has an exterior profile so dimensioned to allow the enclosure to be moved along a sidewalk of a city without completely obstructing a navigable portion of the sidewalk. As such, the dimensions of the enclosure 105 are not dictated solely by the exemplary dimensions provided herein. In addition, the enclosure has a mass capable of being moved along the ground 140 via the plurality of wheels 135 by the single adult human being 115. In an embodiment, enclosure 105 has a weight of about 60 pounds (about 27.2 kilograms).

[0016] As illustrated, the portable dwelling 100 includes a floor portion 121, a plurality of wall portions 122, 123, 124, 125 removably connected to the floor portion 121, and a roof portion 126 disposed above and, removably connected to the plurality of wall portions 122, 123, 124, 125. The plurality of surfaces 121-126 may be molded structures fabricated from an engineering plastic such as polyester glass thermoplastic for example, from any other moldable material suitable for the intended purpose disclosed herein such as fiber reinforced or unreinforced thermoset plastic for example, or may be made from any other material suitable for the intended purpose disclosed herein, such as fiberglass panels for example. The plurality of wall portions include a front portion 122, a first side portion 123, a second side portion 124, and a rear portion 125, wherein the front portion 122 is movable to provide ingress and egress by the adult human being with respect to the interior space 110. In addition, the rear portion 125 is movable to allow ingress and egress by the adult human being with respect to the interior space 110. In an embodiment, the plurality of surfaces 121-126, also herein referred to as panels, are made from an engineering plastic, such as glass reinforced polyester for example.

[0017] Referring to Figure 2, the front portion 122 is movable from a vertical plane (as illustrated via the orientation of enclosure 105 in Figure 2) to a horizontal plane (as illustrated by reference numeral 122' in Figure 2) proximate the roof portion 126, and in response to being oriented in the horizontal plane, is capable of being

translated in the horizontal plane in a direction "A" to further cover either the roof portion 126 or the interior space at least partially. That is, an end portion 145 of the front portion 122 is permitted to overhang the enclosure 105, thereby providing a type of soffit to protect the interior space 110 of dwelling 100 from weather elements when open. It will be appreciated that when two dwellings are disposed adjacent each other, which will be discussed further below, with the rear edge of the roof portion of the frontward dwelling being disposed adjacent a front edge of the roof portion of the rearward dwelling, thereby defining a roof seam, the soffit of the rearward dwelling will extend across the roof seam, thereby providing further protection of the interior space of the two interlocked dwellings against weather elements. In an embodiment, the front portion 122 opens in a manner similar to a single-panel garage door having a pin or roller that follows a track, the pin/roller being a part of the front portion 122, and the track being a part of the sides 123, 124 or roof 126 portions, for example. In an embodiment, the pin/roller and track are integrally molded with the respective panels.

[0018] Referring to Figures 3 and 4, the rear portion 125 includes a first panel 150 slidably movable in a vertical plane with respect to a second panel 155, which may also be slidably movable in the vertical plane with respect to the first panel 150. Channels 160 in the floor portion 121 and the roof portion 126 facilitate the sliding action of panels 150, 155. Ventilation openings 165 in the panels 150, 155 provide for ventilation to the interior space 110. An alternate arrangement for ventilation openings 170 is depicted in Figure 5. Ventilation openings 165, 170 may be circular or elongated slots, and may be disposed on any of the surfaces of wall portions 122, 123, 124, 125. Floor portion 121 may include a drain opening 175 (best seen by referring back to Figure 1) to allow for the interior to be easily cleaned and the cleaning solutions washed out of the drain.

[0019] Referring to Figures 6 and 7, each portable dwelling 100 includes means for stacking one dwelling on top of an other, such as recesses 180 in the front portion 122, rear portion 125 and/or roof portion 126, configured and dimensioned to receive the wheels 135, which are preferably locked. As seen in Figure 7, an embodiment of enclosure 105 is configured with the floor portion 121 and the roof portion 126 having matching curved profiles, which facilitates water runoff in a rainfall. The close fit between wheels 135 and recesses 180 provide a sturdy means, with the wheels locked, for interlocking one dwelling on top of the other so as to deter horizontal movement of the stacked one dwelling with respect to the other dwelling.

[0020] Referring to Figures 8 and 9, each enclosure 105 includes means, such as loops (coupling rings) 185, 190, for interlocking one dwelling with an other disposed endwise adjacent thereto so as to limit movement of the interlocked one dwelling with respect to the other dwelling. Loops 185 and 190 are vertically offset with respect

to each other to facilitate an over-under engagement of the loops, which also serves to have all dwellings having their front portion facing the same direction when coupled end-to-end.

[0021] Referring to Figures 10 and 11, the roof portion 126 is securely fastenable and unfastenable to the plurality of wall portions, and particularly the end wall portions 123, 124, via compression clamps 195 disposed within the interior space 110, thereby allowing emergency egress from the interior space by quick removal of the roof portion 126. Figure 10 illustrates the compression clamps 195 generally, along with an exemplary arrangement, and Figure 11 illustrates a more detailed aspect of the compression clamps 195. With reference now to Figure 11, an exemplary compression clamp 195 is seen to have a handle 200 with a pivot 205 that is pivotally secured to a standoff 210 of end wall portion 124. A locking link 215 is pivotally attached to handle 200 at pivot 220, and has a free looped end 225 that engages with hook 230, which is part of roof portion 126. By virtue of the overcentering action of locking link 215 relative to pivot 205 as handle 200 is pivoted into the locked position, as illustrated in Figure 11, the roof portion 126 is securely fastened to, but unfastenable from, the plurality of wall portions of enclosure 105. Similar compression clamps, or other suitable means, located on the plurality of surfaces 120 within the enclosure 105 may be used to secure the enclosure from within the enclosure, and especially to secure the front portion 122 when closed.

[0022] Referring to Figures 12-14, at least one of the plurality of wall portions 122, 123, 124, 125, such as wall portion 123 or 124 as illustrated in Figures 12 and 13 for example, may include one or more of a storage cabinet 235, a magazine holder 240, a document holder 245, a utility bar 250, a utility hook 255, a cup holder 260, a shower nozzle 265, a light fixture 270, and a fan fixture 275, with the electrical fixtures 270, 275 being powered by a solar panel 280. In an embodiment, the cup holder 260 includes a fluid drain 285 directed external of the interior space 110 to address any spillage in cup holder 260. In an embodiment, the shower nozzle 265 is connected to a fitting through the side wall portion 124 that allows a water supply to be connected.

[0023] Referring to Figures 15-17, an embodiment of the enclosure 105 includes at least one exterior handle 290 to facilitate movement of the enclosure along the ground via the plurality of wheels by the single adult human being, and to facilitate lifting of the enclosure when stacking one on top of an other. The handles may protrude outboard of the enclosure, as depicted by handle 295 in Figure 16, or may be a handle 300 recessed within a pocket 305 relative to a surface defined by outside wall portion 124, which defines an outside dimension of the enclosure 105. In either embodiment of Figures 15-17, handles 290, 295, 300 may be molded integral with molded wall portion 124.

[0024] Referring to Figure 18, the exterior of the enclosure 105 may be secured by a sliding latch 310 slidably

secured to the interior surface of the floor portion 121, the sliding latch being extendable and retractable through an opening 315 at the bottom of the front portion 122, the sliding latch having a loop or hole 320 for receiving a lock 325 therethrough.

[0025] Referring to Figure 19, the plurality of wall portions, represented by wall portion 123, of enclosure 105 are connectable via a knock down interlocking means, such as the peg 330 and hole 335 arrangement illustrated, or other such suitable means. To prevent rain water or other weather elements from working their way into the interior space 110 through a wall portion, an embodiment includes drainage troughs 336 and channels 337 formed in the floor portion 121, where the bottom edge 338 of a respective wall portion plugs into a respective trough 336 of the floor portion 121. While a weather-proofing arrangement of only one wall portion 123 relative to floor portion 121 is illustrated in Figure 19, it will be appreciated that the same teaching can be applied to any of the wall portions disclosed herein.

[0026] Another weather-proofing arrangement at the outer corners of enclosure 105 is illustrated in Figure 20, which depicts a top plan view of wall portions 122, 123, 124, 125 with roof portion 126 removed. Here, each end of wall portions 123, 124 each include a projection 127 (represented in the expanded view of Figure 20 by projection 127 of one end of wall portion 124), and each end of wall portions 122, 125 each include a pocket 128 (represented in the expanded view of Figure 20 by pocket 128 of one end of wall portion 122), where a respective projection 127 engages with an associated pocket 128 to provide a weather-proof arrangement thereat. While Figures 19 and 20 depict specific arrangements of edges, troughs, projections and pockets, it will be appreciated that such specificity is for illustration purposes only, and that the scope of the invention as defined in the claims encompasses other arrangements and geometries suitable for the purposes disclosed herein, such as dovetail projections and pockets for example.

[0027] Referring to Figure 21, a first dwelling 100.1 may be disposed adjacent to and interlocked with a second dwelling 100.2 such that the front opening (front portion 122 in the open position) of the second dwelling 100.2 being disposed adjacent the rear portion 125 of the first dwelling 100.1, the rear portion 125 of the first dwelling 100.1 remaining capable of being opened and closed thereby allowing the interior space 110 of the first dwelling 100.1 to flow into the interior space 110 of the second dwelling 100.2. A third dwelling 100.3 may be similarly disposed with respect to a fourth dwelling, but stacked on top of the first 100.1 and second 100.2 dwellings as illustrated.

[0028] Referring briefly back to Figure 14 in combination with Figure 21, a removable screen portion 340 may be disposed on the roof portions 126 of the first and the second dwellings if not stacked, or on the roof portions 126 of the third and fourth dwellings if stacked and as illustrated in Figure 21, across the roof seam 345 defined

by the front edge of one roof portion and the rear edge of an adjacent roof portion, thereby providing further protection of the interior space of the interlocked dwellings against weather elements.

[0029] While certain geometries have been discussed herein with respect to certain parts of dwelling 100, it will be appreciated that these certain geometries are for illustration purposes only and that other geometries for those certain parts may be employed where those other geometries remain suitable for the purposes disclosed herein. For example, enclosure 105 is described and illustrated as having a frame defined by a plurality of rigid planar panel surfaces 120, more specifically wall portions 122, 123, 124, 125, that are rectangular in shape and form vertical walls extending between floor portion 121 and roof portion 126. However, an alternative embodiment may employ wall portions of any shape while remaining suitable for the purposes disclosed herein, such as trapezoidal shaped panels that provide for inwardly or outwardly angled wall portions, or bubble shaped panels that provide for outwardly bulging wall portions for example. In an embodiment employing a wall portion alternative to a vertically oriented wall portion, a weather-flange integrally formed on appropriate edges of a respective wall portion may be employed so as to shield the interior of the dwelling from weather elements. As a further example, wall portion 122 is described and illustrated herein as defining a single-panel garage door that can be opened and closed. However, an alternative embodiment may employ a wall portion 122 similar to wall portions 123, 124, but with a side-hinged door and door opening formed therein, where the side-hinged door and door opening are constructed in a manner known in the art and placable in any convenient location (centrally located or toward one side for example) on wall portion 122. As yet a further example, roof portion 126 is described and illustrated being a flat panel. However, an alternative embodiment may employ a storage compartment integrally formed on the top thereof and accessible and lockable from the exterior space of the dwelling.

[0030] From the foregoing, it will be appreciated that a plurality of the dwellings 100 may be arranged and coupled together in a communal manner that defines both personal space and community space, the personal space for an individual person including the interior space of that person's dwelling, the community space including exterior space having a boundary defined by a perimeter of the plurality of dwellings.

[0031] For example, and referring to Figure 22, the plurality of the dwellings 100 may be arranged in a plurality of rows 350, each row comprising a plurality of pairs 355 of the dwellings 100, each pair having a first dwelling 100.1 disposed adjacent to and interlocked with a second dwelling 100.2, such that a rear side of the first dwelling is adjacent a front side of the second dwelling, each pair within each row being coupled with its neighboring pair. As illustrated, two of the plurality of rows are disposed parallel with each other and with a space therebetween,

the space defining a street 360 and the community space. As also illustrated, a community plan may be established, which includes toilets and showers/baths 365, and post office boxes 370 that provide residents of the dwellings with a means for receiving mail.

[0032] Referring to Figures 23-27, the plurality of the dwellings 100 may be arranged about a circle 375, each dwelling in the plurality being coupled with, but capable of being decoupled from, its neighboring dwelling, the enclosed circle defined by the coupled dwellings defining the community space. As illustrated in Figures 23 and 24, one of the dwellings could be used as an emergency exit. As illustrated in Figures 25 and 26, one or more of the dwellings 100 may be decoupled to provide access 380 to the community space, then recoupled as desired. When arranged about a circle, the community plan allows for a secure community space for young children to play in.

[0033] Referring to Figure 28, a cutaway isometric view of the portable dwelling 100 is depicted with exemplary internal and external features added (compare with Figure 8-12 and 15-17 for example). Here, coupling rings 185, 190 are depicted having an orientation in a vertical plane versus a horizontal plane (as depicted in Figures 8 and 9), both orientations are contemplated herein.

[0034] While certain arrangements of dwellings 100 have been described and illustrated herein, it will be appreciated that these certain arrangements are for illustration purposes only and that any arrangement of dwellings 100 may be employed, such as a serpentine arrangement for example, in accordance with an embodiment of the invention. Any and all such arrangements are contemplated herein and are considered within the scope of the invention as defined in the claims disclosed.

[0035] While the invention has been described with reference to exemplary embodiments, it will be understood by those skilled in the art that various changes may be made and equivalents may be substituted for elements thereof without departing from the scope of the invention as defined in the claims. In addition, many modifications may be made to adapt a particular situation or material to the teachings of the invention without departing from the scope thereof as defined in the claims. Therefore, it is intended that the invention not be limited to the particular embodiment disclosed as the best or only mode contemplated for carrying out this invention, but that the invention will include all embodiments falling within the scope of the appended claims. Also, in the drawings and the description, there have been disclosed exemplary embodiments of the invention and, although specific terms may have been employed, they are unless otherwise stated used in a generic and descriptive sense only and not for purposes of limitation, the scope of the invention therefore not being so limited. Moreover, the use of the terms first, second, etc. do not denote any order or importance, but rather the terms first, second, etc. are used to distinguish one element from another. Furthermore, the use of the terms a, an, etc. do not denote a

limitation of quantity, but rather denote the presence of at least one of the referenced item.

5 Claims

1. A portable dwelling (100) for use on ground (140), comprising:

a rigid enclosure (105) having an interior space (110) for receiving a human being (115);
the enclosure (105) comprising a frame defined by a plurality of rigid panel surfaces (120) between the interior space (110) and an exterior space (130) capable of maintaining dryness of the interior space in the event of a rainfall in the exterior space;
a plurality of wheels (135) attached to the enclosure (105) that facilitate movement of the enclosure along the ground (140);
the enclosure (105) having a mass capable of being moved along the ground (140) via the plurality of wheels (135) by only one adult human being; **characterised in that**
the plurality of rigid panel surfaces (120) of the frame comprise: a floor portion (121); a plurality of wall portions (122-125) removably connected to the floor portion; and a roof portion (126) disposed above and removably connected to the plurality of wall portions;
wherein the plurality of wall portions (122-125) comprises a front portion (122), a first side portion (123), a second side portion (124), and a rear portion (125);
wherein the front and rear portions are movable to provide ingress and egress by the human being (115) with respect to the interior space (110); and
in that it comprises means (180) for stacking one portable dwelling on top of another, and for interlocking the stacked one with the other so as to deter horizontal movement of the stacked one with respect to the other.

2. A portable dwelling (100) for use on ground (140), comprising:

a rigid enclosure (105) having an interior space (110) for receiving a human being (115);
the enclosure (105) comprising a frame defined by a plurality of rigid panel surfaces (120) between the interior space (110) and an exterior space (130) capable of maintaining dryness of the interior space in the event of a rainfall in the exterior space;
a plurality of wheels (135) attached to the enclosure (105) that facilitate movement of the enclosure along the ground (140);

the enclosure (105) having a mass capable of being moved along the ground (140) via the plurality of wheels (135) by only one adult human being;

characterised in that

the plurality of rigid panel surfaces (120) of the frame comprise: a floor portion (121); a plurality of wall portions (122-125) removably connected to the floor portion; and a roof portion (126) disposed above and removably connected to the plurality of wall portions;

wherein the plurality of wall portions (122-125) comprises a front portion (122), a first side portion (123), a second side portion (124), and a rear portion (125);

wherein the front and rear portions are movable to provide ingress and egress by the human being (115) with respect to the interior space (110); and

in that it comprises means (185, 190) for interlocking a first portable dwelling with an adjacently disposed second portable dwelling so as to limit movement of the interlocked first portable dwelling with respect to the adjacently disposed second portable dwelling.

3. The portable dwelling of Claim 1 or 2, wherein:

the front portion (122) is movable from a vertical plane to a horizontal plane proximate the roof portion (126), and in response to being oriented in the horizontal plane, is translatable in the horizontal plane in a direction to further cover either the roof portion or the interior space (110) at least partially.

4. The portable dwelling of Claim 1 or 2, wherein:

the rear portion (125) comprises a first panel (150) and a second panel (155) each being disposed in a vertical plane, wherein at least one of the first panel and the second panel is slidably movable in the vertical plane with respect to the other of the first panel and the second panel.

5. The portable dwelling of Claim 1 or 2, wherein:

the roof portion (126) is securely fastenable and unfastenable to at least one of the plurality of wall portions (122-125) via compression clamps (195) disposed within the interior space, thereby allowing emergency egress from the interior space (110) via the roof portion.

6. The portable dwelling of Claim 1 or 2, wherein:

the enclosure (105) comprises an exterior handle (290) to facilitate movement of the enclosure

along the ground via the plurality of wheels (135) by the only one adult human being, wherein the exterior handle is optionally recessed within a pocket (305) relative to a surface defined by an outside dimension of the enclosure.

7. The portable dwelling of Claim 1 or 2, wherein:

the plurality of surfaces of the enclosure comprise at least one of: means for securing the enclosure from within the enclosure; and, means for securing the enclosure from outside the enclosure.

8. The portable dwelling of Claim 2, wherein:

the interlocking means comprises loops (185,190) extending endwise but not sidewise off of the enclosure (105).

9. The portable dwelling of Claim 1 or 2, wherein:

the plurality of surfaces are connectable via a knock down interlocking means (185,190).

10. The portable dwelling of any previous claim, wherein:

at least one of the plurality of wall portions comprises at least one of a ventilation opening (165;170), a storage cabinet, a magazine holder, a document holder, a utility bar, a utility hook, a cup holder comprising a fluid drain extending from the interior space to the exterior space, a shower nozzle, a fan fixture, and a light fixture, accessible from the interior space (110); and wherein the floor portion (121) optionally comprises a drain opening (175).

11. A plurality of portable dwellings (100) according to claim 1 or 2, each of the plurality of portable dwellings (100) comprising:

a rigid enclosure (105) having an interior space (110) for receiving a human being (115); the enclosure (105) comprising a frame defined by a plurality of rigid panel surfaces (120) between the interior space (110) and an exterior space (130) capable of maintaining dryness of the interior space in the event of a rainfall in the exterior space; a plurality of wheels (135) attached to the enclosure (105) that facilitate movement of the enclosure along the ground (140); the enclosure (105) having a mass capable of being moved along the ground (140) via the plurality of wheels (135) by only one adult human being; and wherein each of the plurality of portable dwell-

ings comprises a front wall portion (122) capable of being opened and closed, and a rear wall portion (125) capable of being opened and closed, an opened front wall portion defining a front opening, and an opened rear wall portion defining a rear opening;
 wherein a first of the plurality of portable dwellings is disposed adjacent to and interlocked with a second of the plurality of portable dwellings such that the front opening of the second dwelling is disposed adjacent the rear wall portion of the first dwelling, the rear wall portion of the first dwelling remaining capable of being opened and closed thereby allowing the interior space (110) of the first dwelling to flow into the interior space (110) of the second dwelling.

12. The plurality of portable dwellings of Claim 11, wherein each of the dwellings comprises a roof portion (126), a rear edge of the roof portion of the first dwelling being disposed adjacent a front edge of the roof portion of the second dwelling thereby defining a roof seam (345), and further comprising at least one of:

the front wall portion (122) of the second dwelling being disposable on the roof portions (126) of the first and the second dwelling across the roof seam thereby providing further protection of the interior space (110) of the interlocked first and second dwellings against weather elements; and
 a removable screen portion (340) disposed on the roof portions of the first and the second dwelling across the roof seam thereby providing further protection of the interior space of the interlocked first and second dwellings against weather elements.

Patentansprüche

1. Mobile Wohnung (100) zum Einsatz auf dem Boden (140), umfassend:

ein rigides Gehäuse (105) mit einem Innenraum (110) zur Aufnahme eines Menschen (115);
 wobei das Gehäuse (105) einen Rahmen umfasst, der durch eine Mehrzahl rigider Plattenflächen (120) zwischen dem Innenraum (110) und einem Außenraum (130) definiert ist und im Falle von Regen im Außenraum die Trockenheit des Innenraums bewahren kann, wobei an das Gehäuse (105) eine Mehrzahl Räder (135) angeschlossen ist, die die Bewegung des Gehäuses am Boden (140) unterstützen;
 wobei das Gehäuse (105) eine Masse aufweist, die es einem einzelnen erwachsenen Menschen

ermöglicht, das Gehäuse am Boden (140) mittels der Mehrzahl Räder (135) zu bewegen,
dadurch gekennzeichnet, dass
 die Mehrzahl rigider Plattenflächen (120) des Rahmens umfasst: einen Fussbodenteil (121); eine Mehrzahl mit dem Fussbodenteil abnehmbar verbundener Wandteile (122 - 125) und einem über der Mehrzahl Wandteile angeordneten und abnehmbar mit ihnen verbundenen Dachteil (126);
 wobei die Mehrzahl Wandteile (122 - 125) einen Vorderteil (122), einen ersten Seitenteil (123), einen zweiten Seitenteil (124) und einen Hinterteil (125) umfasst;
 wobei Vorder- und Hinterteil beweglich sind, um dem Menschen (115) den Eingang in und den Ausgang aus dem Innenraum (110) zu ermöglichen;
 und dass es Mittel (180) zum Stapeln einer mobilen Wohnung auf eine andere und zur Verzahnung der gestapelten Wohnungen vorgesehen sind, um horizontale Bewegungen der gestapelten Wohnungen relativ zueinander zu verhindern.

2. Mobile Wohnung (100) zum Einsatz auf dem Boden (140), umfassend:

ein rigides Gehäuse (105) mit einem Innenraum (110) zur Aufnahme eines Menschen (115);
 wobei das Gehäuse (105) einen Rahmen umfasst, der durch eine Mehrzahl rigider Plattenflächen (120) zwischen dem Innenraum (110) und einem Außenraum (130) definiert ist und im Falle von Regen im Außenraum die Trockenheit des Innenraums bewahren kann;
 wobei an das Gehäuse (105) eine Mehrzahl Räder (135) angeschlossen ist, die die Bewegung des Gehäuses am Boden (140) unterstützen;
 wobei das Gehäuse (105) eine Masse aufweist, die es einem einzelnen erwachsenen Menschen ermöglicht, das Gehäuse am Boden (140) mittels der Mehrzahl Räder (135) zu bewegen,
dadurch gekennzeichnet,
dass die Mehrzahl rigider Plattenflächen (120) des Rahmens umfasst: einen Fussbodenteil (121); eine Mehrzahl mit dem Fussbodenteil abnehmbar verbundener Wandteile (122 - 125) und einem über der Mehrzahl Wandteile angeordneten und abnehmbar mit ihnen verbundenen Dachteil (126);
 wobei die Mehrzahl Wandteile (122 - 125) einen Vorderteil (122), einen ersten Seitenteil (123), einen zweiten Seitenteil (124) und einen Hinterteil (125) umfasst;
 wobei Vorder- und Hinterteil beweglich sind, um dem Menschen (115) den Eingang in und den Ausgang aus dem Innenraum (110) zu ermög-

- lichen;
und **dass** es Mittel (185, 190) zur Verzahnung einer ersten mobilen Wohnung mit einer angrenzend angeordneten zweiten mobilen Wohnung umfasst, um Bewegungen der verzahnten ersten mobilen Wohnung relativ zur angrenzend angeordneten zweiten mobilen Wohnung einzuschränken.
3. Mobile Wohnung nach Anspruch 1 oder 2, wobei:
- der Vorderteil (122) von einer vertikalen Ebene in eine nahe dem Dachteil (126) gelegene horizontale Ebene (126) beweglich ist und bei einer Orientierung in der horizontalen Ebene in der horizontalen Ebene in eine Richtung verschiebbar ist, um entweder den Dachteil oder den Innenraum (110) mindestens teilweise weiter zu decken.
4. Mobile Wohnung nach Anspruch 1 oder 2, wobei:
- der Hinterteil (125) eine erste Platte (150) und eine zweite Platte (155) umfasst, die jeweils in einer vertikalen Ebene angeordnet sind, wobei mindestens eine der ersten und der zweiten Platte in der vertikalen Ebene relativ zur jeweils anderen Platte verschiebbar ist.
5. Mobile Wohnung nach Anspruch 1 oder 2, wobei:
- der Dachteil (126) an mindestens einem der Mehrzahl Wandteile (122 - 125) mittels im Innenraum angeordneter Kompressionsklemmen (195) befestigt und davon abgenommen werden kann, wodurch der Austritt aus dem Innenraum (110) über den Dachteil im Notfall ermöglicht wird.
6. Mobile Wohnung nach Anspruch 1 oder 2, wobei:
- das Gehäuse (105) einen äußeren Handgriff (290) umfasst, um die Verschiebung des Gehäuses am Boden mittels der Mehrzahl Räder (135) durch nur einen erwachsenen Menschen zu ermöglichen, wobei der äußere Handgriff wahlweise in eine Aussparung (305) relativ zu einer von einer äußeren Dimension des Gehäuses definierten Oberfläche vertieft ist.
7. Mobile Wohnung nach Anspruch 1 oder 2, wobei:
- die Mehrzahl Flächen des Gehäuses mindestens eines der nachfolgenden Elemente umfasst: Mittel zur Befestigung des Gehäuses von innerhalb des Gehäuses und Mittel zur Befestigung des Gehäuses von außerhalb des Gehäuses.
8. Mobile Wohnung nach Anspruch 2, wobei:
- die Verzahnungsmittel Schleifen (185, 190) umfassen, die sich der Länge nach, aber nicht seitlich, vom Gehäuse (105) erstrecken.
9. Mobile Wohnung nach Anspruch 1 oder 2, wobei:
- die Mehrzahl Flächen über zerlegbare Verzahnungsmittel (185, 190) verbunden werden können.
10. Mobile Wohnung nach einem der vorstehenden Ansprüche, wobei:
- mindestens einer der Mehrzahl Wandteile mindestens eines der nachfolgenden Elemente umfasst: eine Lüftungsöffnung (165; 170), einen Lagerschrank, einen Zeitschriftenhalter, einen Dokumentenhalter, ein Brecheisen, Werkzeughaken, Getränkehalter, umfassend einen sich vom Innenraum in den Außenraum erstreckenden Abfluss, Duschdüse, Ventilatoranbauteil, Beleuchtungskörper, die jeweils vom Innenraum (110) aus zugänglich sind; und wobei der Fussbodenteil (121) ferner eine Abflussöffnung (175) umfasst.
11. Eine Mehrzahl mobiler Wohnungen (100) nach Anspruch 1 oder 2, jeweils umfassend:
- ein rigides Gehäuse (105) mit einem Innenraum (110) zur Aufnahme eines Menschen (115); wobei das Gehäuse (105) einen Rahmen umfasst, der durch eine Mehrzahl rigider Plattenflächen (120) zwischen dem Innenraum (110) und einem Außenraum (130) definiert ist und im Falle von Regen im Außenraum die Trockenheit des Innenraums bewahren kann; eine Mehrzahl ans Gehäuse (105) angeschlossener Räder (135), die die Bewegung des Gehäuses am Boden (140) ermöglichen; wobei das Gehäuse (105) eine Masse aufweist, die es einem einzelnen erwachsenen Menschen ermöglicht, das Gehäuse am Boden (140) mittels der Mehrzahl Räder (135) zu bewegen, und wobei jede der Mehrzahl mobiler Wohnungen einen vorderen Wandteil (122), der geöffnet und geschlossen werden kann, und einen hinteren Wandteil (125), der geöffnet und geschlossen werden kann, umfasst, und wobei ein geöffneter vorderer Wandteil eine vordere Öffnung und eine geöffneter hinterer Wandteil eine hintere Öffnung definieren, wobei eine erste der Mehrzahl mobiler Wohnungen an eine zweite der Mehrzahl mobiler Wohnungen derart angrenzend angeordnet und damit verzahnt ist, dass die vordere Öffnung der

zweiten Wohnung an den hinteren Wandteil der ersten Wohnung grenzt, wobei der hintere Wandteil der ersten Wohnung weiterhin geöffnet und geschlossen werden kann, wodurch der Innenraum (110) der ersten Wohnung in den Innenraum (110) der zweiten Wohnung fließen kann.

12. Mehrzahl mobiler Wohnungen nach Anspruch 11, wobei jeder der Wohnungen einen Dachteil (126) umfasst, wobei eine Hinterkante des Dachteils der ersten Wohnung an eine Vorderkante des Dachteils der zweiten Wohnung grenzend angeordnet ist, wodurch eine Dachnaht (345) gebildet wird, und ferner umfassend mindestens eines der nachfolgenden Elemente:

einen vorderen Wandteil (122) der zweiten Wohnung, der auf den Dachteilen (126) der ersten und der zweiten Wohnung über die Dachnaht angeordnet werden kann, wodurch ein weiterer Schutz des Innenraums (110) der verzahnten ersten und zweiten Wohnung vor der Witterung gewährleistet wird; und
eine abnehmbare Abschirmung (340) auf den Dachteilen der ersten und zweiten Wohnung über die Dachnaht vorgesehen ist, wodurch ein weiterer Schutz der verzahnten ersten und zweiten Wohnung vor der Witterung gewährleistet wird.

Revendications

1. Unité d'habitation portable (100) pour utilisation sur le sol (140), comprenant :

une enceinte rigide (105) ayant un espace intérieur (110) pour recevoir un être humain (115) ; l'enceinte (105) comprenant un châssis défini par une pluralité de surfaces de panneaux rigides (120) entre l'espace intérieur (110) et un espace extérieur (130), capables de maintenir une atmosphère sèche dans l'espace intérieur dans le cas d'une chute de pluie dans l'espace extérieur ;
une pluralité de roues (135) fixées à l'enceinte (105) pour faciliter le mouvement de l'enceinte le long du sol (140) ;
l'enceinte (105) ayant une masse qui est capable d'être déplacée le long du sol (140) via la pluralité de roues (135) par seulement un être humain adulte ;

caractérisée en ce que :

la pluralité de surfaces de panneaux rigides (120) du châssis comprennent une partie de

plancher (121) ; une pluralité de parties de parois (122-125) raccordées de manière amovible à la partie de sol ; et une partie de toit (126) disposée au-dessus de la pluralité de parties de parois et raccordée à celles-ci de manière amovible ;

dans laquelle la pluralité de parties de parois (122-125) comprennent une partie avant (122), une première partie latérale (123), une seconde partie latérale (124) et une partie arrière (125) ; dans laquelle les parties avant et arrière sont mobiles pour permettre l'entrée et la sortie de l'être humain (115) par rapport à l'espace intérieur (110) ; et

elle comprend des moyens (180) pour empiler une unité d'habitation portable l'une sur l'autre et pour bloquer celle empilée avec l'autre afin d'empêcher un mouvement horizontal de celle empilée par rapport à l'autre.

2. Unité d'habitation portable (100) pour utilisation sur le sol (140), comprenant :

une enceinte rigide (105) ayant un espace intérieur (110) pour recevoir un être humain (115) ; l'enceinte (105) comprenant un châssis défini par une pluralité de surfaces de panneaux rigides (120) entre l'espace intérieur (110) et l'espace extérieur (130), capables de maintenir l'atmosphère sèche de l'espace intérieur dans le cas d'une chute de pluie dans l'espace extérieur ;
une pluralité de roues (135) fixées à l'enceinte (105) pour faciliter le mouvement de l'enceinte le long du sol (140) ;
l'enceinte (105) ayant une masse capable d'être déplacée le long du sol (140) via la pluralité de roues (135) par seulement un être humain adulte ;

caractérisée en ce que :

la pluralité de surfaces de panneaux rigides (120) du châssis comprennent une partie de plancher (121) ; une pluralité de parties de parois (122-125) raccordées de manière amovible à la partie de plancher ; et une partie de toit (126) disposée au-dessus de la pluralité de parties de parois et raccordée à celles-ci de manière amovible ;

dans laquelle la pluralité de parties de parois (122-125) comprend une partie avant (122), une première partie latérale (123), une seconde partie latérale (124) et une partie arrière (125) ; dans laquelle les parties avant et arrière sont mobiles pour assurer l'entrée et la sortie de l'être humain (115) par rapport à l'espace intérieur (110) ; et

- elle comprend des moyens (185, 190) pour bloquer une première unité d'habitation portable avec une seconde unité d'habitation portable disposée de manière adjacente de façon à limiter le déplacement de la première unité d'habitation portable bloquée par rapport à la seconde unité d'habitation portable disposée de manière adjacente.
- 3.** Unité d'habitation portable selon la revendication 1 ou la revendication 2, dans laquelle :
- la partie avant (122) peut être déplacée d'un plan vertical à un plan horizontal à proximité de la partie de toit (126) et, en réponse à l'orientation dans le plan horizontal, peut être déplacée dans le plan horizontal dans une direction permettant encore de couvrir la partie de toit ou l'espace intérieur (110) au moins en partie.
- 4.** Unité d'habitation selon la revendication 1 ou la revendication 2, dans laquelle :
- la partie arrière (125) comprend un premier panneau (150) et un second panneau (155), chacun étant disposé dans un plan vertical, dans laquelle au moins l'un du premier panneau et du second panneau peut être déplacé par coulissement dans le plan vertical par rapport à l'autre du premier panneau et du second panneau.
- 5.** Unité d'habitation portable selon la revendication 1 ou la revendication 2, dans laquelle :
- la partie de toit (126) peut être solidement fixée et dégagée d'au moins l'une de la pluralité de parties de parois (122-125) via des pinces de compression (195) disposées dans l'espace intérieur, ce qui permet une sortie d'urgence de l'espace intérieur (110) via la partie de toit.
- 6.** Unité d'habitation portable selon la revendication 1 ou la revendication 2, dans laquelle :
- l'enceinte (105) comprend une poignée externe (290) pour faciliter le mouvement de l'enceinte le long du sol via la pluralité de roues (135) par le seul être humain adulte, dans lequel la poignée externe est encastrée éventuellement dans une poche (305) par rapport à une surface définie par une dimension externe de l'enceinte.
- 7.** Unité d'habitation portable selon la revendication 1 ou la revendication 2, dans laquelle :
- la pluralité de surfaces de l'enceinte comprend au moins l'un ou l'autre de moyens de fixation de l'enceinte de l'intérieur de celle-ci ; et de
- moyens de fixation de l'enceinte de l'extérieur de celle-ci.
- 8.** Unité d'habitation portable selon la revendication 2, dans laquelle :
- les moyens de blocage comprennent des boucles (185, 190) s'étendant perpendiculairement, mais pas latéralement de l'enceinte (105).
- 9.** Unité d'habitation portable selon la revendication 1 ou la revendication 2, dans laquelle :
- la pluralité de surfaces peuvent être raccordées via des moyens de blocage démontables (185, 190).
- 10.** Unité d'habitation portable selon l'une quelconque des revendications précédentes, dans laquelle :
- au moins l'une de la pluralité de parties de parois comprend au moins l'une ou l'autre d'une ouverture de ventilation (165 ; 170), d'une armoire de stockage, d'un porte-revues, d'un porte-documents, d'une barre utilitaire, d'un crochet utilitaire, d'un support de tasses comprenant une évacuation de fluide s'étendant de l'espace intérieur à l'espace extérieur, d'une pomme de douche, d'un ventilateur et d'un appareil d'éclairage accessibles de l'espace intérieur (110) ; et dans laquelle la partie de plancher (121) comprend éventuellement une ouverture d'évacuation (175).
- 11.** Pluralité d'unités d'habitation portables (100) selon la revendication 1 ou la revendication 2, chacune de la pluralité d'unités d'habitation portables (100) comprenant :
- une enceinte rigide (105) ayant un espace intérieur (110) pour recevoir un être humain (115) ; l'enceinte (105) comprenant un châssis défini par une pluralité de surface de panneaux rigides (120) entre l'espace intérieur (110) et un espace extérieur (130), capables de maintenir une atmosphère sèche de l'espace intérieur dans le cas d'une chute de pluie dans l'espace extérieur ;
- une pluralité de roues (135) fixées à l'enceinte (105) pour faciliter le déplacement de l'enceinte le long du sol (140) ;
- l'enceinte (105) ayant une masse capable d'être déplacée le long du sol (140) via la pluralité de roues (135) par seulement un être humain adulte ; et
- dans laquelle chacune de la pluralité d'unités d'habitation portables comprend une partie de paroi avant (122) capable d'être ouverte et fer-

mée et une partie de paroi arrière (125) capable d'être ouverte et fermée, une partie de paroi avant ouverte définissant une ouverture avant et une partie de paroi arrière ouverte définissant une ouverture arrière ;

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dans laquelle une première de la pluralité d'unités d'habitation portables est disposée adjacente à une seconde de la pluralité d'unités d'habitation portables et bloquée sur celle-ci de sorte que l'ouverture avant de la seconde unité d'habitation soit disposée adjacente à la partie de paroi arrière de la première unité d'habitation, la partie de paroi arrière de la première unité d'habitation restant capable d'être ouverte et fermée de manière à permettre à l'espace intérieur (110) de la première unité d'habitation de s'écouler dans l'espace intérieur (110) de la seconde unité d'habitation.

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12. Pluralité d'unités d'habitation portables selon la revendication 11, dans laquelle chacune des unités d'habitation comprend une partie de toit (126), un bord arrière de la partie de toit de la première unité d'habitation étant disposé adjacent à un bord avant de la partie de toit de la seconde unité d'habitation, définissant de la sorte une jonction de toits (345) et comprenant en outre au moins l'un des éléments suivants :

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la partie de paroi avant (122) de la seconde unité d'habitation est disponible sur les parties de toit (126) de la première et de la seconde unité d'habitation en travers de la jonction de toits, en sorte d'assurer une plus grande protection de l'espace intérieur (110) de la première et de la seconde unité d'habitation bloquées à l'encontre des intempéries ; et

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une partie d'écran amovible (340) disposée sur les parties de toit de la première et de la seconde unité d'habitation en travers de la jonction de toits, fournissant de la sorte une plus grande protection de l'espace intérieur des première et seconde unités d'habitation bloquées à l'encontre des intempéries.

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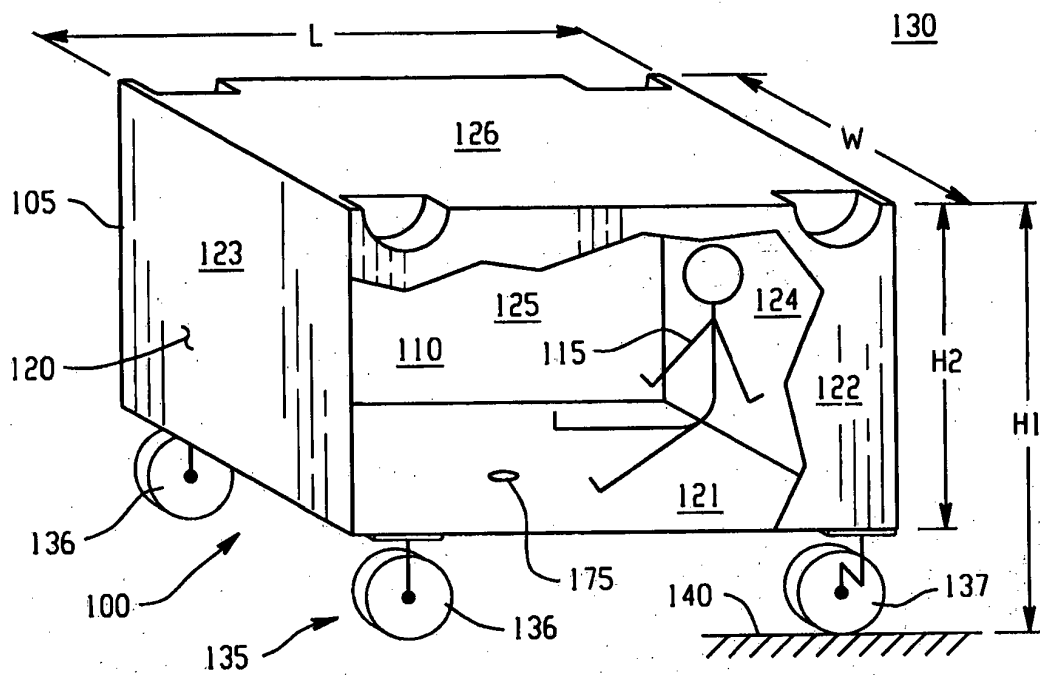


Fig. 1

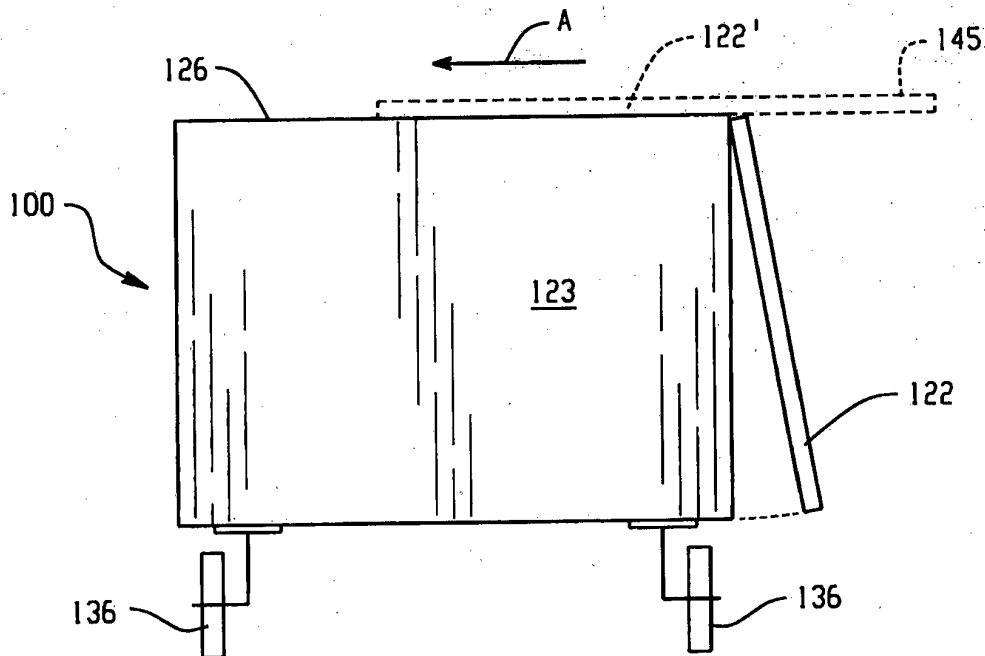


Fig. 2

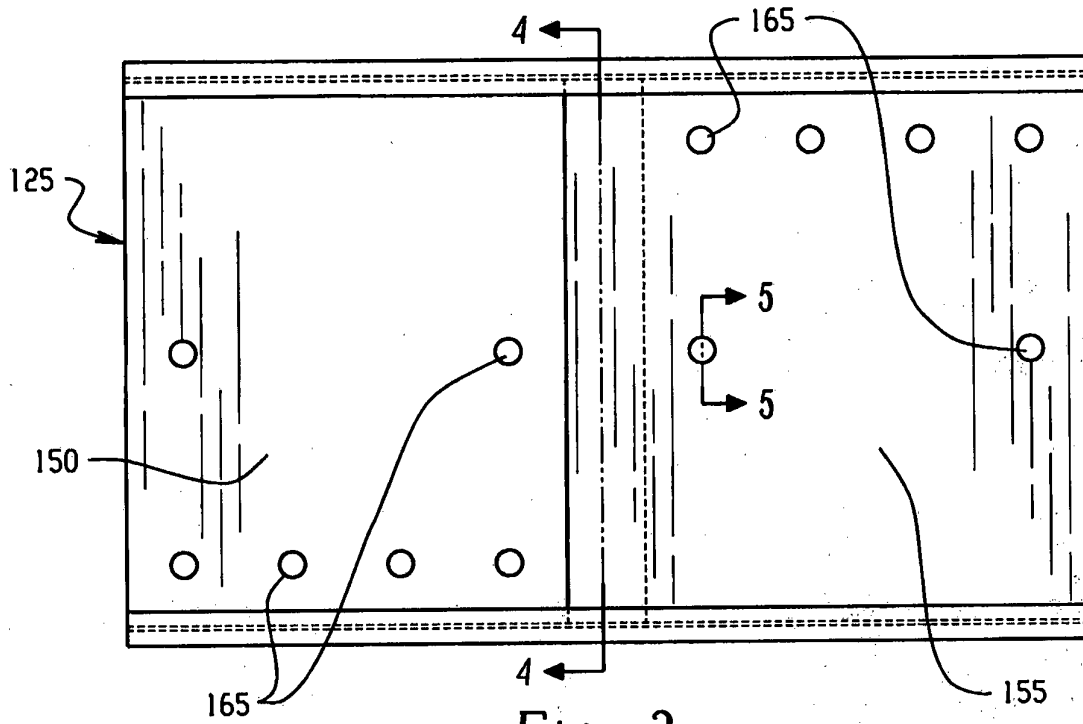


Fig. 3

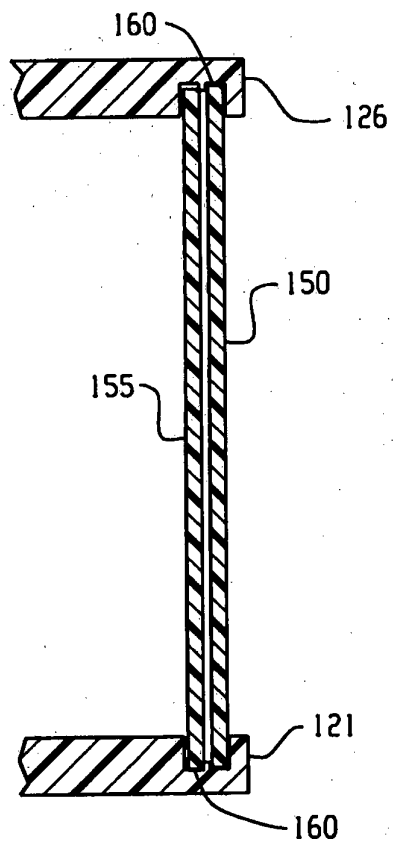


Fig. 4

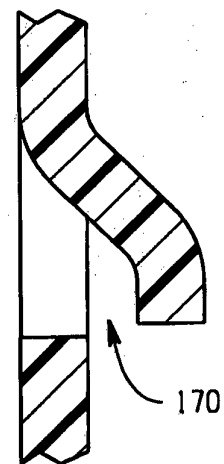


Fig. 5

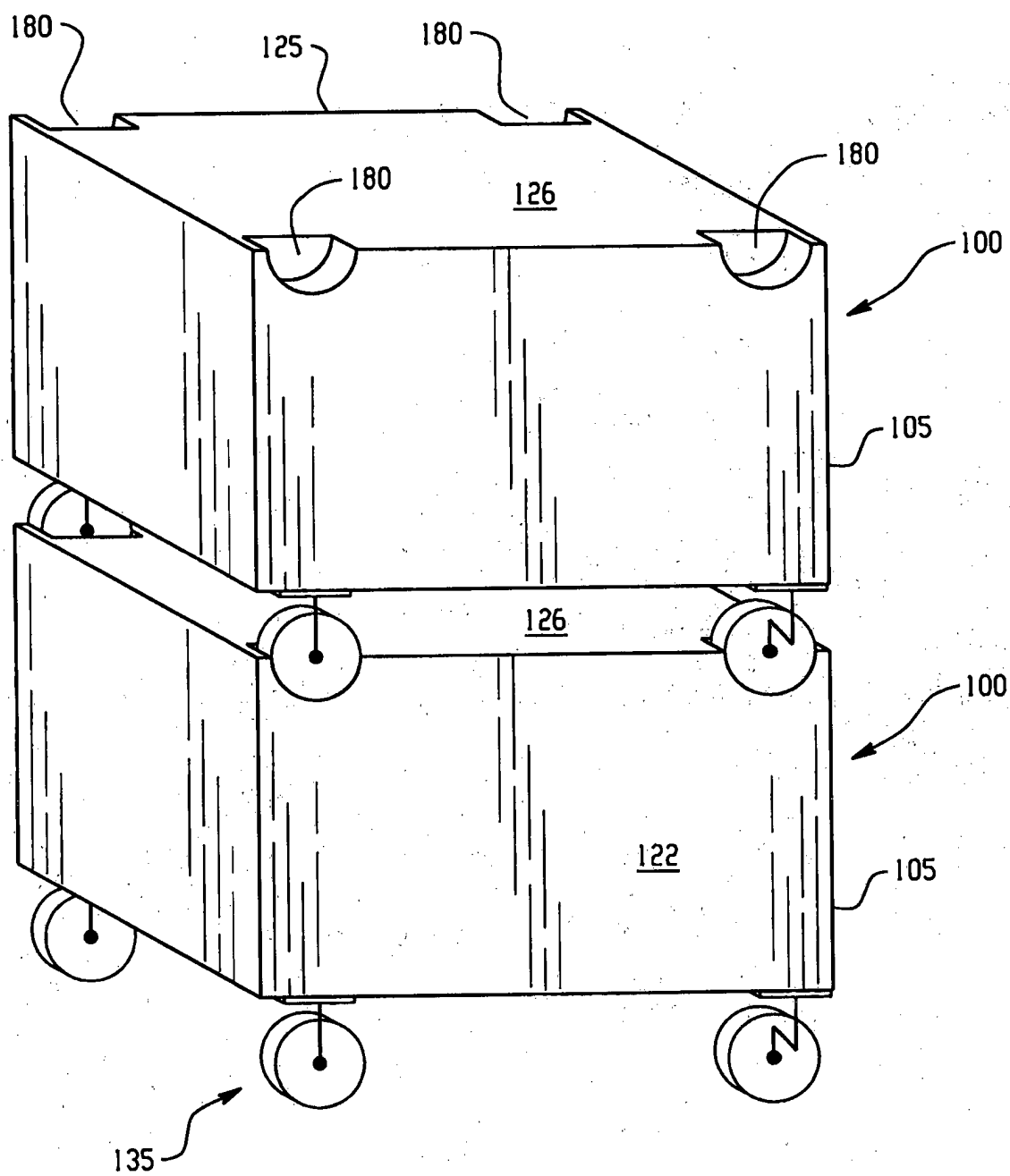


Fig. 6

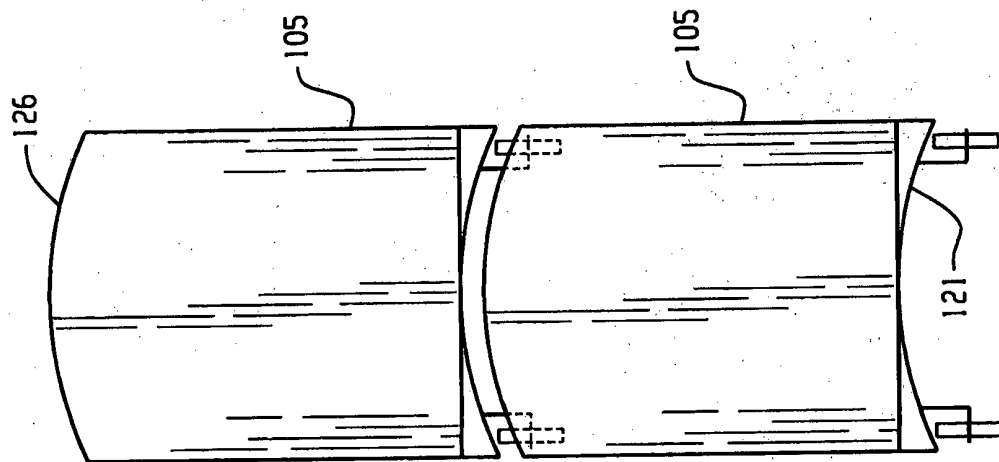


Fig. 7

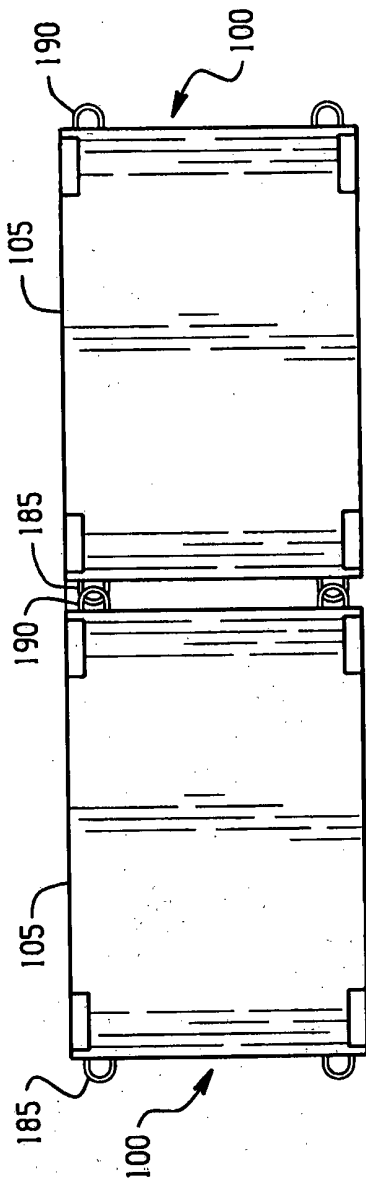


Fig. 8

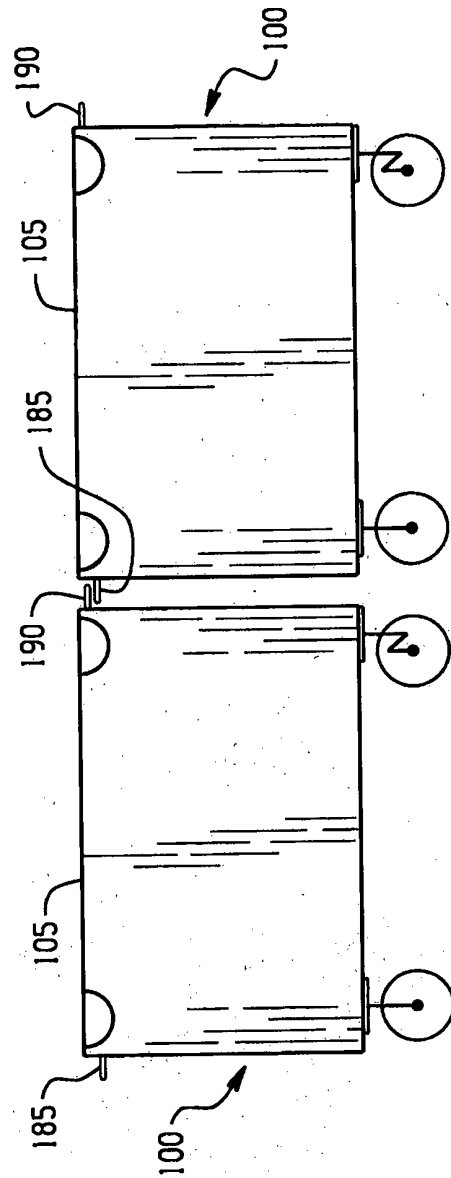


Fig. 9

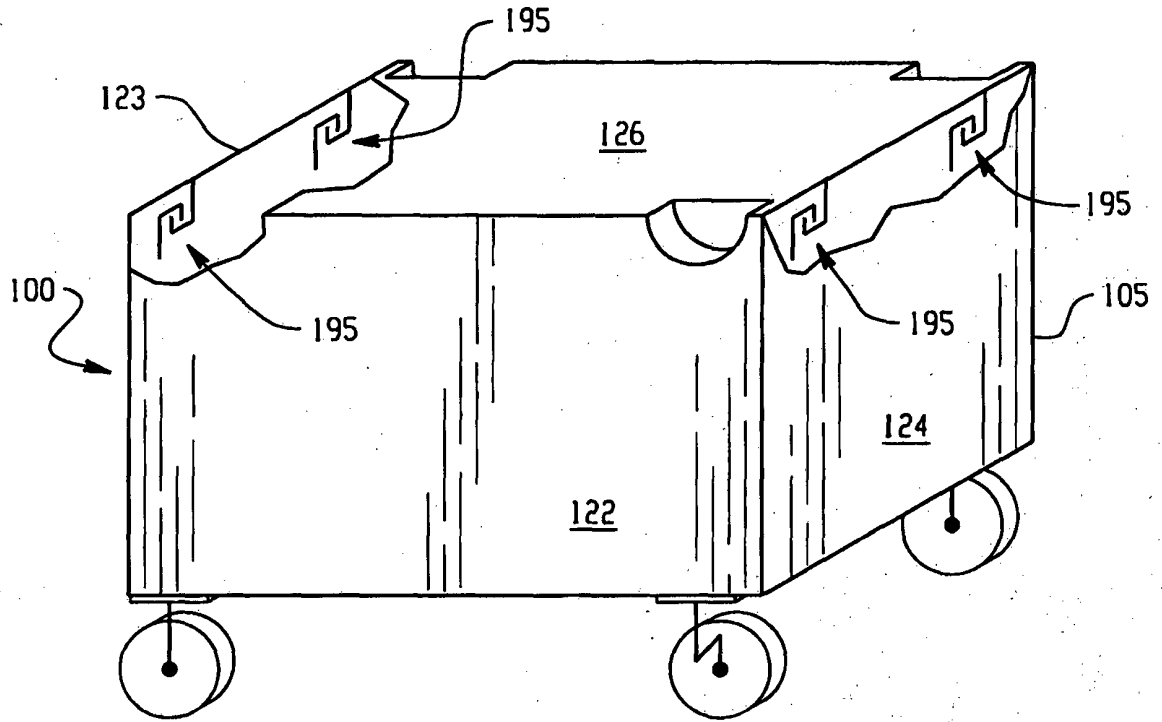


Fig. 10

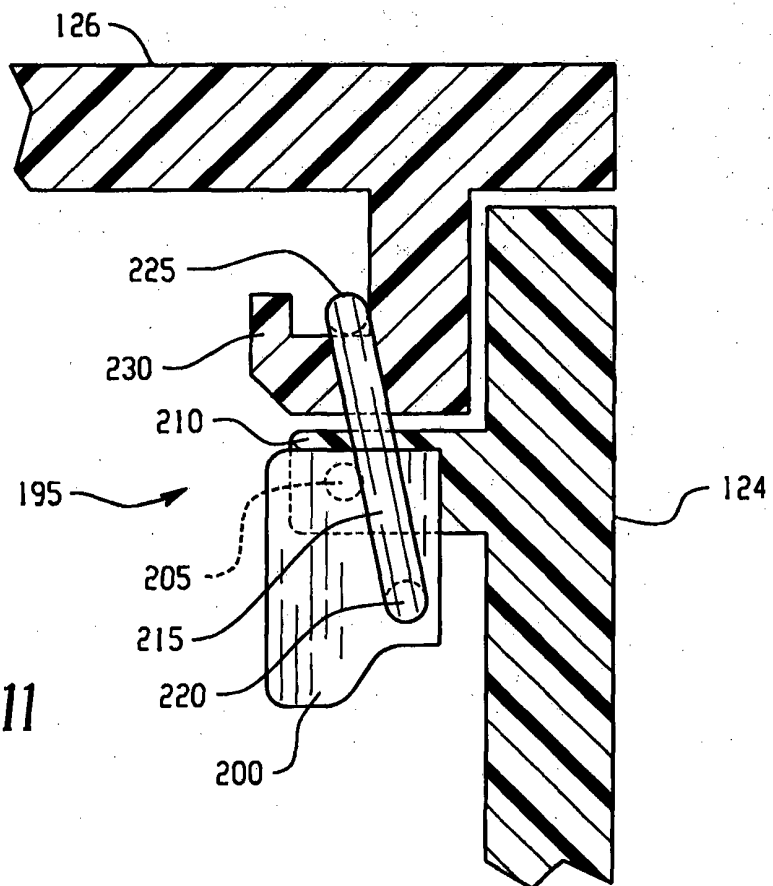


Fig. 11

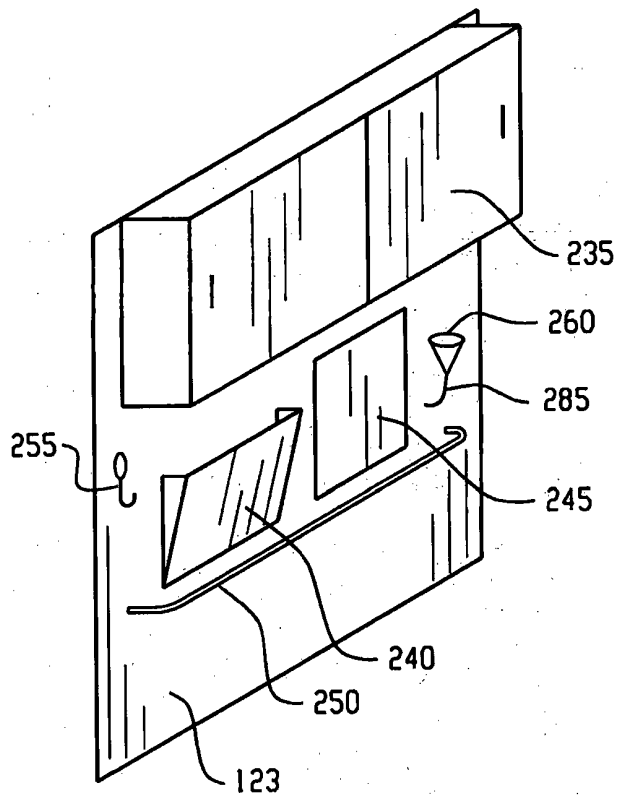


Fig. 12

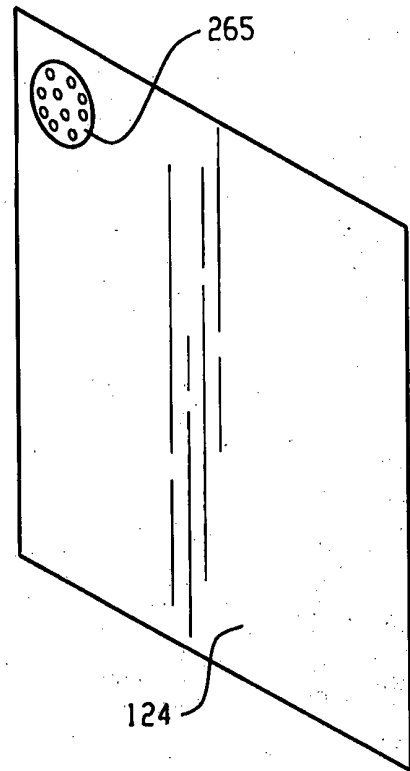


Fig. 13

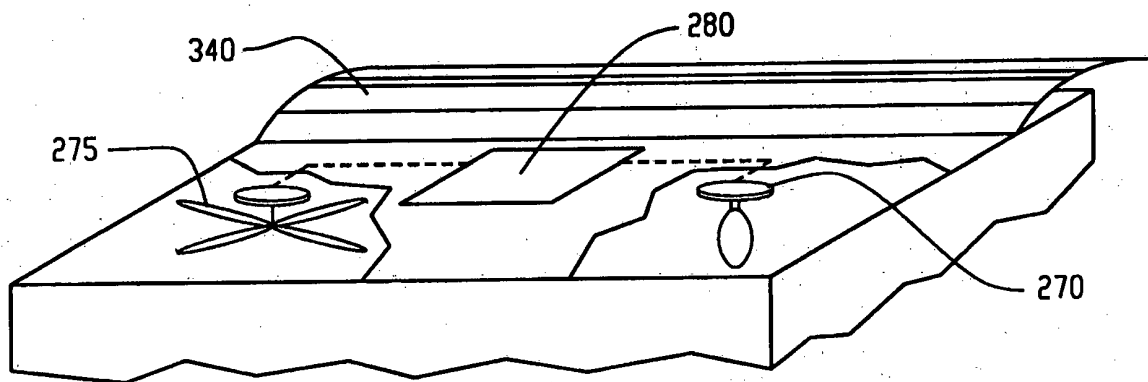


Fig. 14

Fig. 15

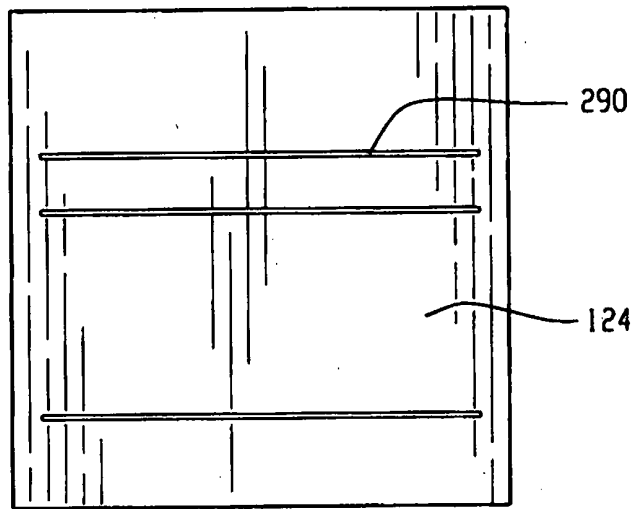


Fig. 16

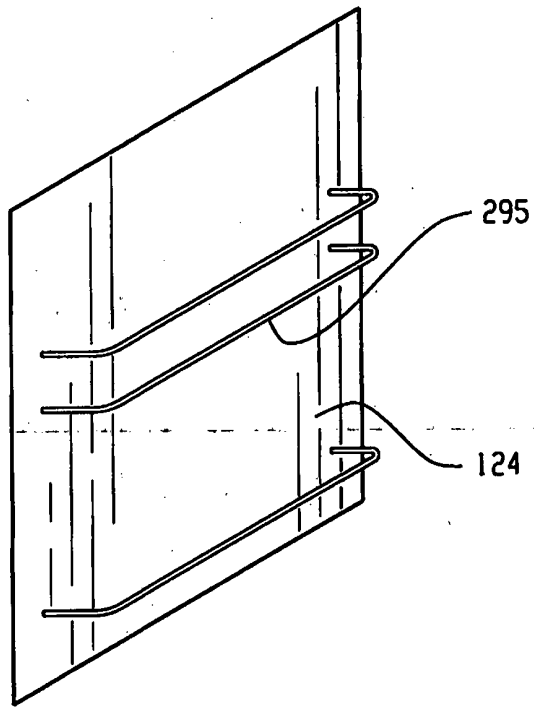
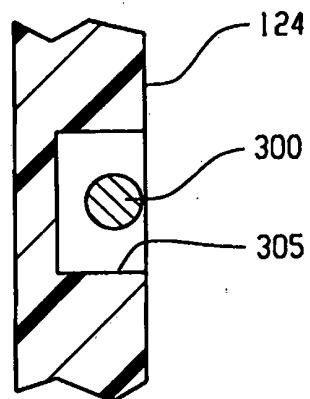


Fig. 17



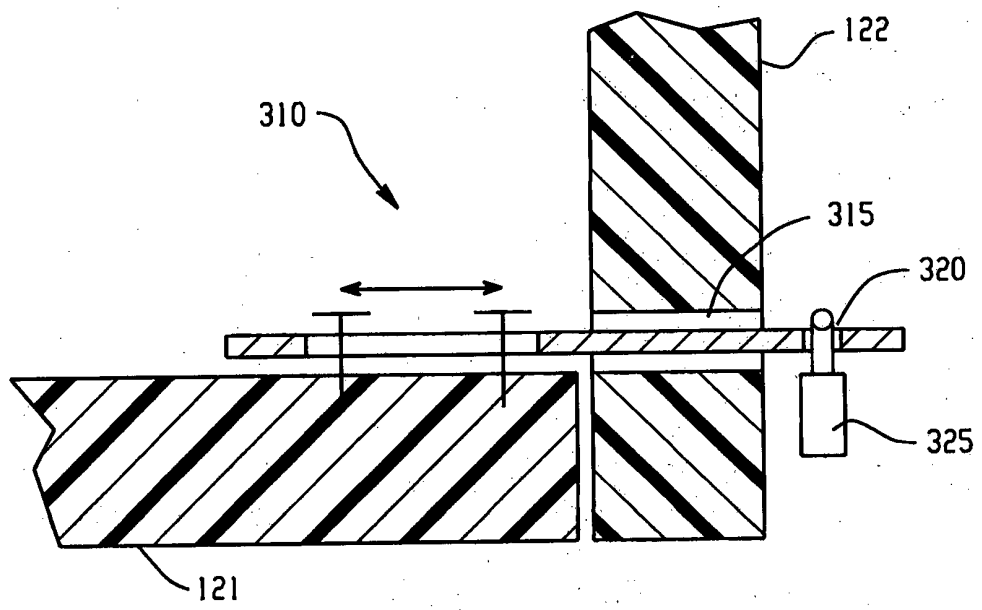


Fig. 18

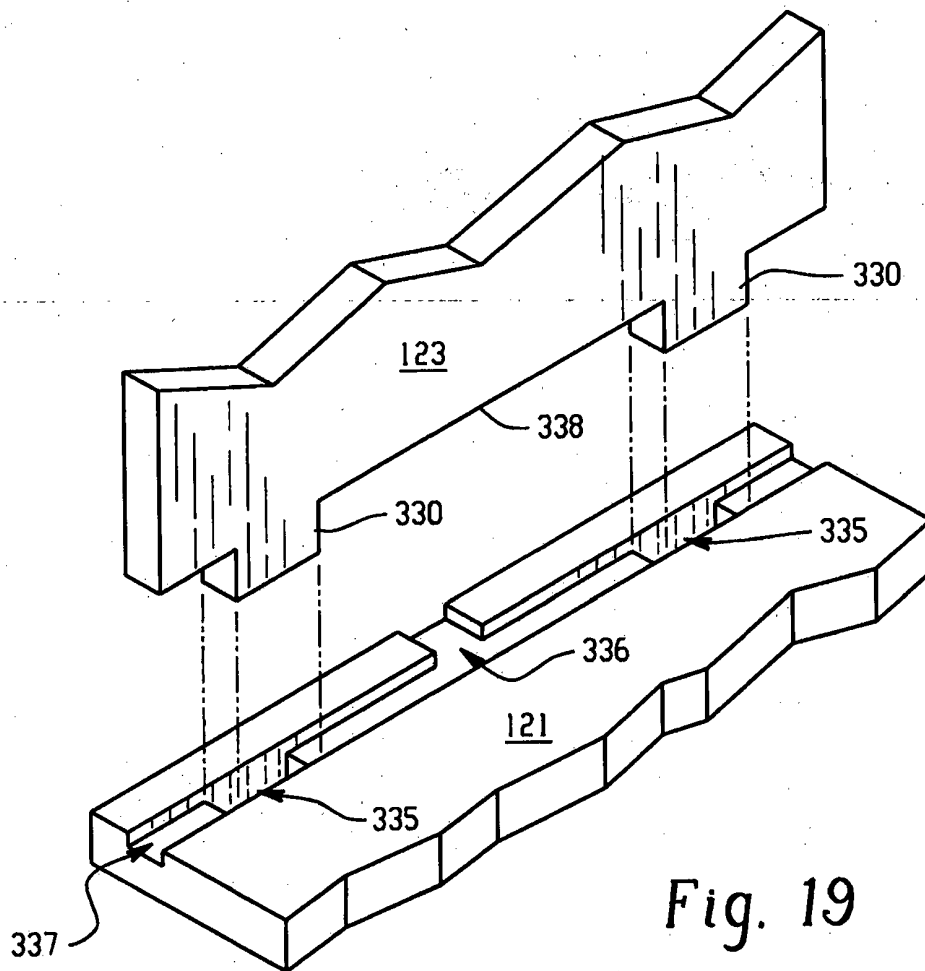


Fig. 19

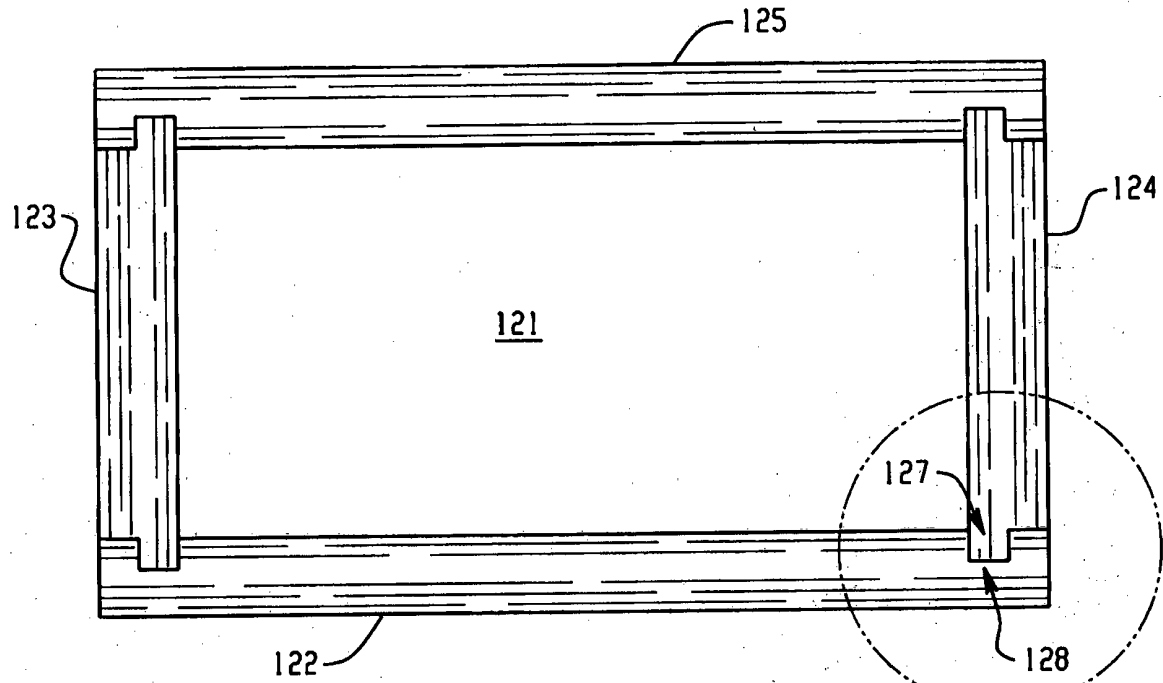


Fig. 20

FIG. 20A

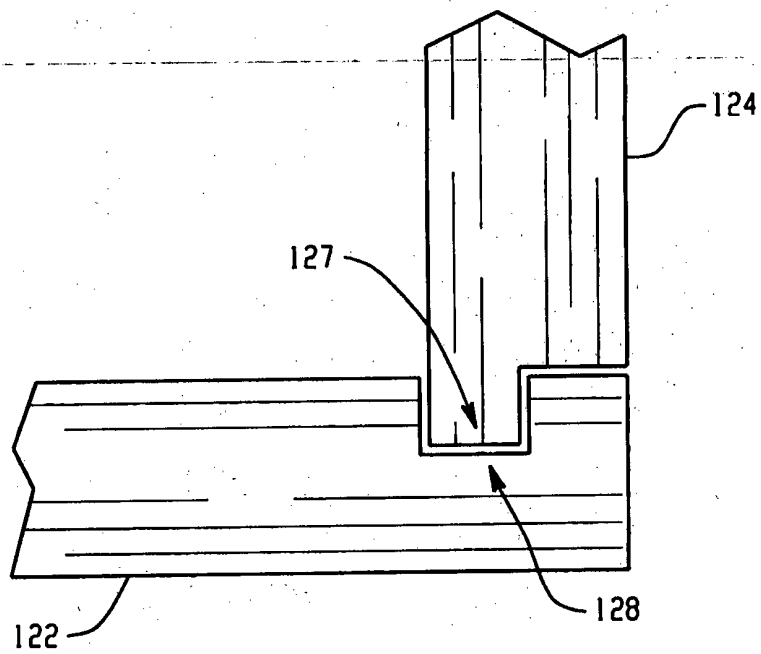


Fig. 20A

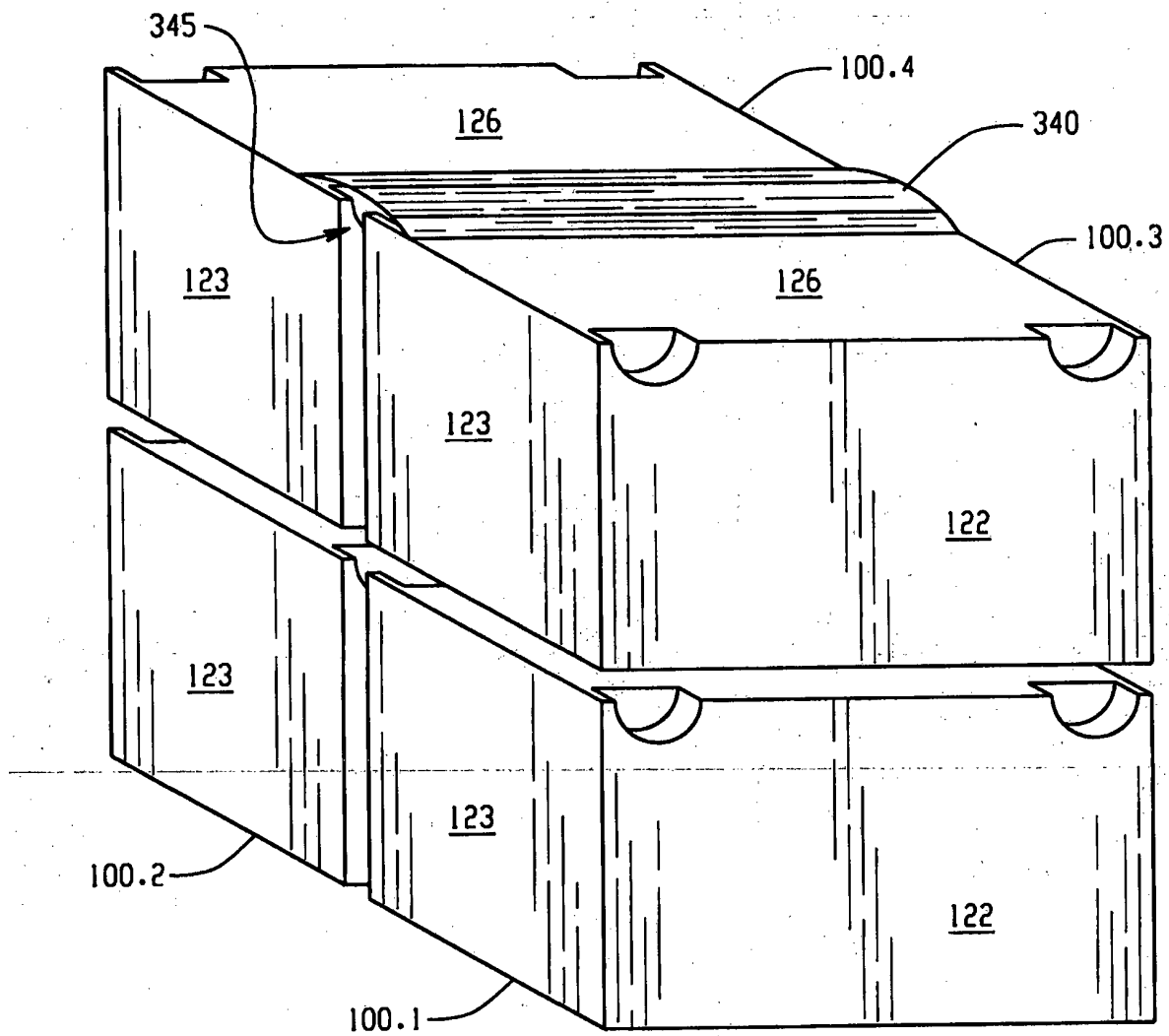


Fig. 21

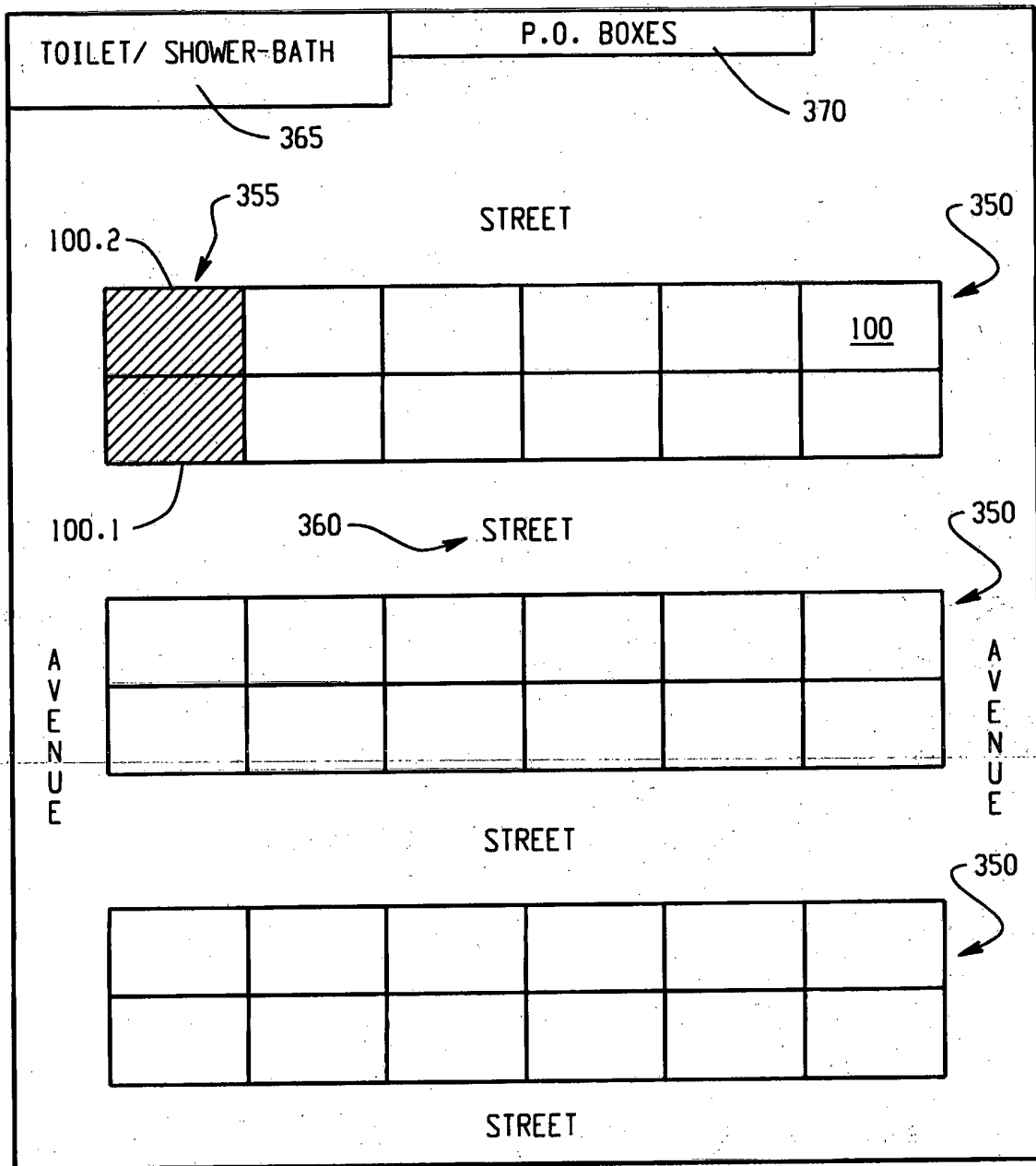
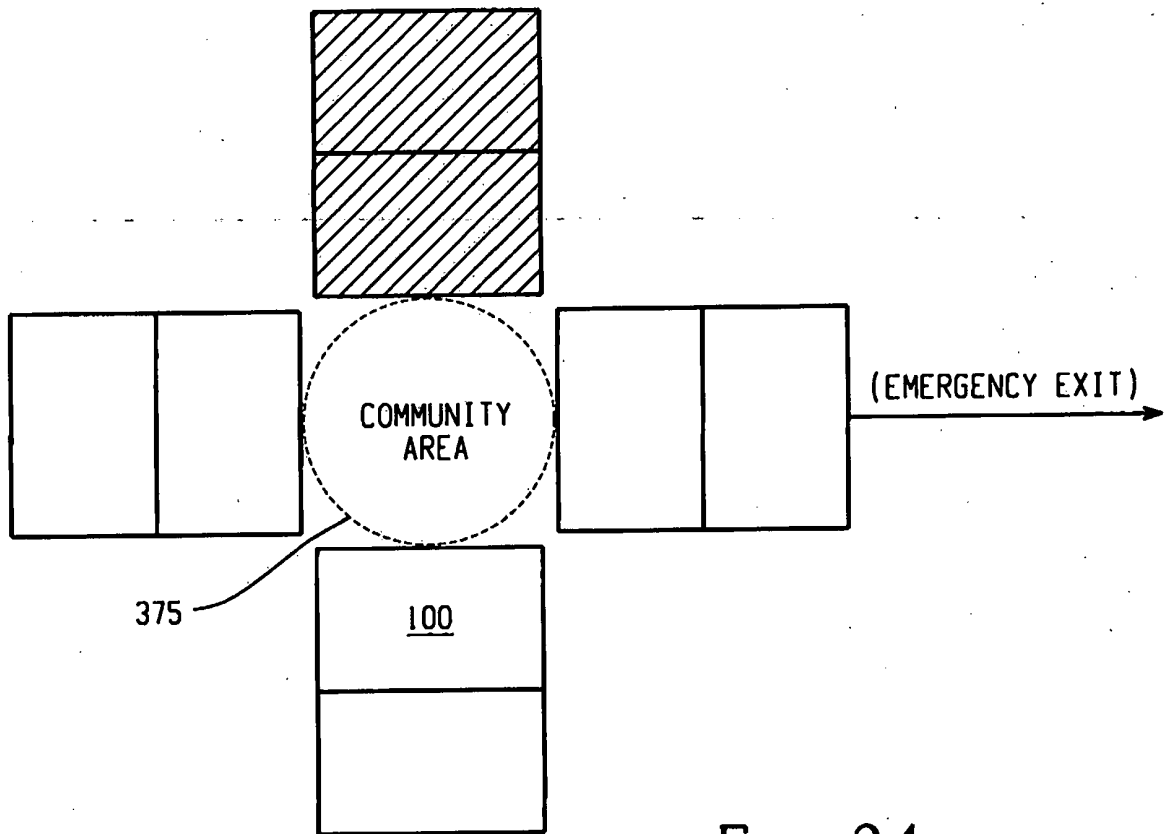
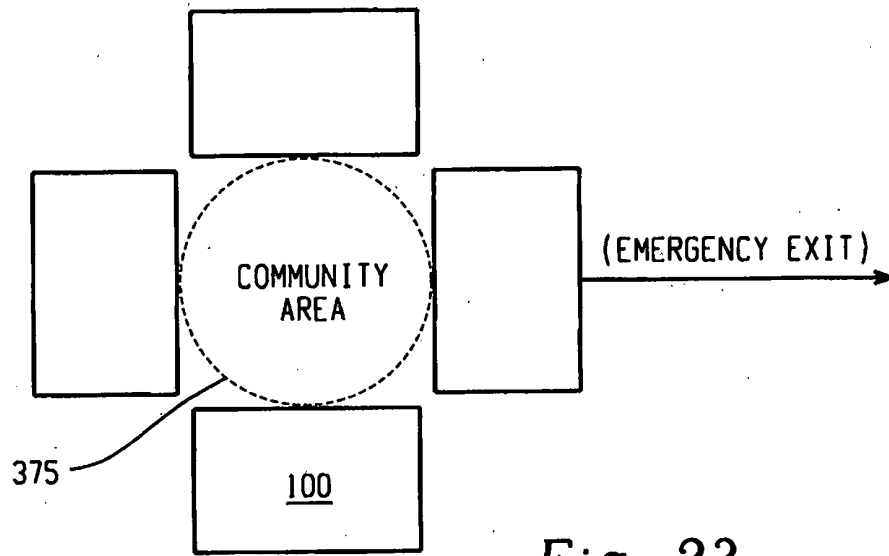


Fig. 22



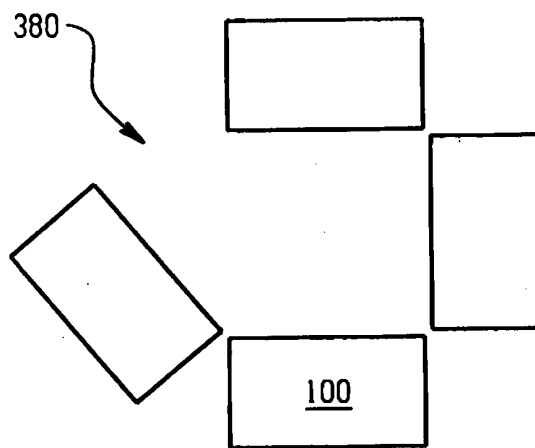


Fig. 25

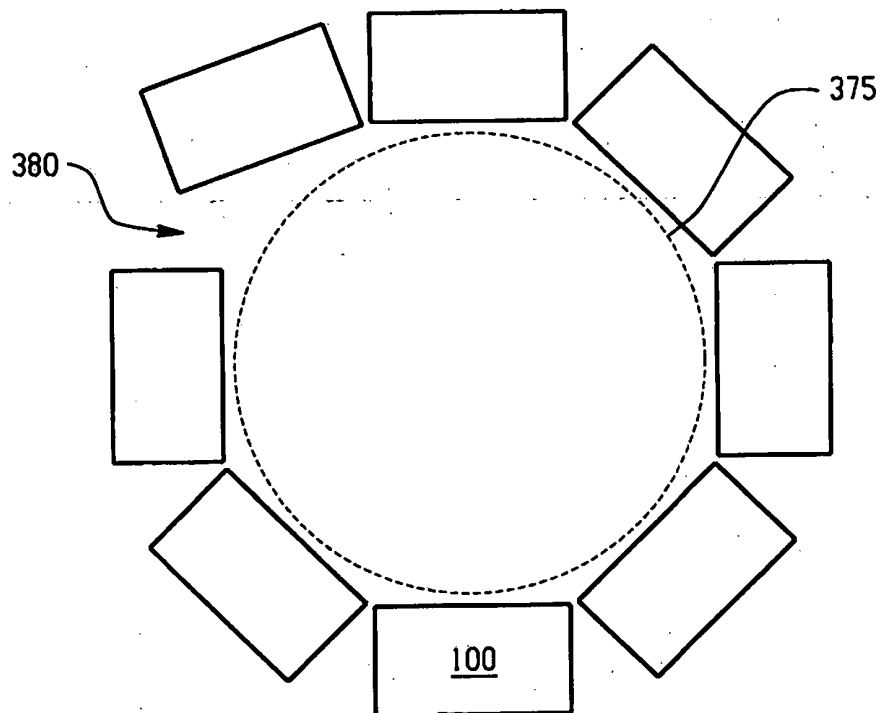


Fig. 26

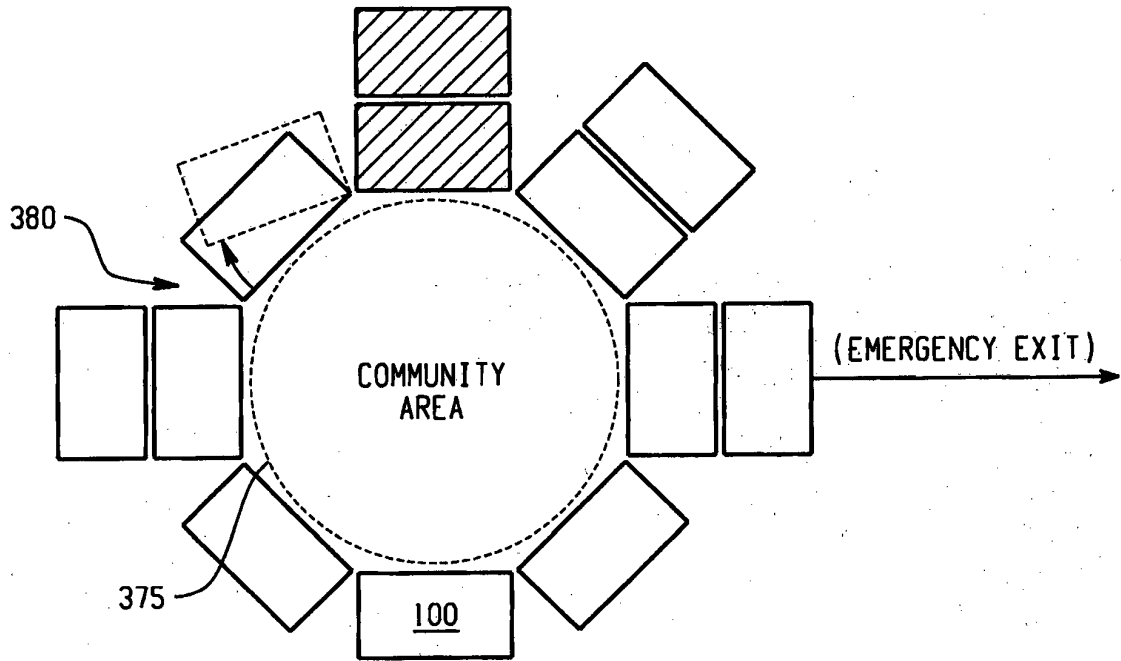


Fig. 27

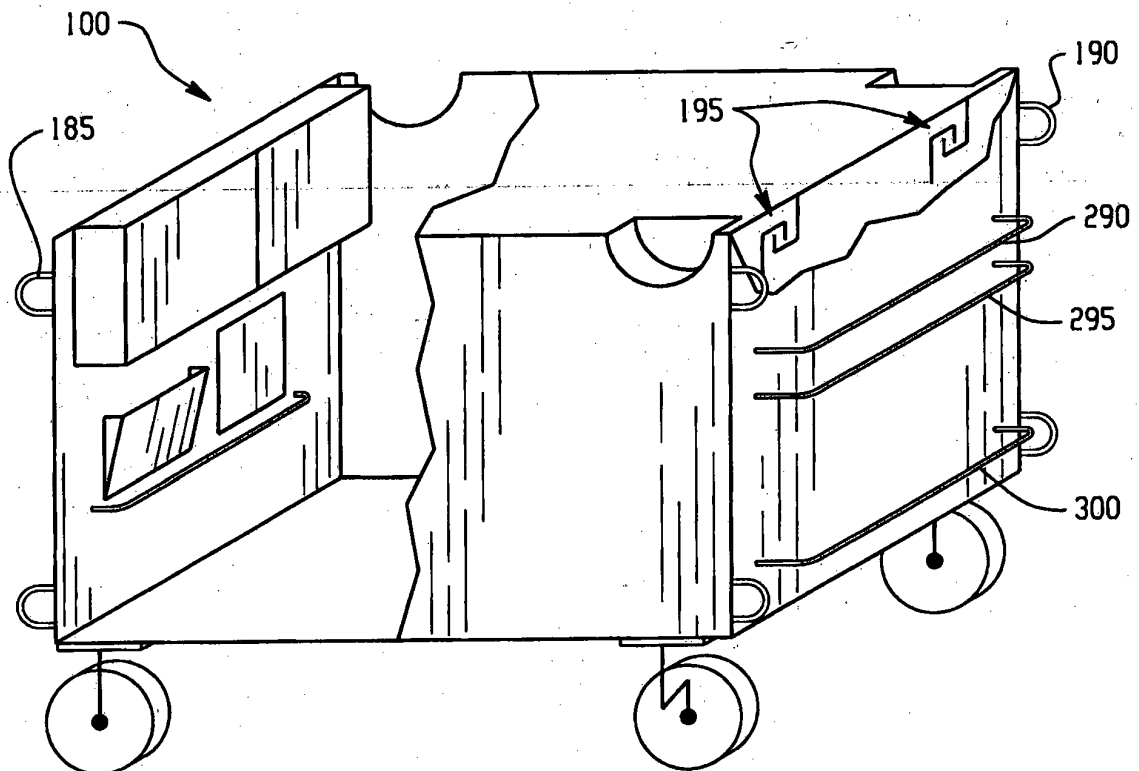


Fig. 28

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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